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Standards for Requesting and Exchanging Site-Specific Historic Usage Information for Retail Electricity and Natural Gas Markets

The Alberta Energy and Utilities Board (EUB/Board) has approved this directive on July 24, 2007.

B. T. McManus, Q.C.
Acting Chairman

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1 Introduction

1.1 Overview

This directive defines the standards for requesting and exchanging site-specific historic usage information for retail electricity and natural gas markets, including the business transactions and the business rules that govern the production and use of these transactions. This directive is effective June 1, 2008, to provide distributors with sufficient time to implement necessary systems and processes.

1.2 Related Codes, Regulations, and Legislation

This directive is established by the Alberta Energy and Utilities Board (EUB) under the provision of the *Public Utilities Board Act*, as amended from time to time.

The current acts and regulations, as they are amended from time to time, that address issues related to the sharing of historic usage information between distributors and retailers and are relevant to the Historic Usage Information Procedure are

- *Electric Utilities Act* (*EUA*),
- *Code of Conduct Regulation* (under the *EUA*),
- *Fair Trading Act*,
- *Electricity Marketing Regulation* (under the *Fair Trading Act*),
- *Gas Utilities Act* (*GUA*),
- *Code of Conduct Regulation* (under the *GUA*),
- *Natural Gas Marketing Regulation* (under the *Fair Trading Act*), and
- *Personal Information Protection Act* (*PIPA*).

1.3 Definitions

Unless otherwise indicated, the terms used in this directive have the meaning given to them in the *EUA*, as amended from time to time. Any reference to the *Settlement System Code* (*SSC*), the ISO Rules, the *GUA*, or the *Tariff Billing Code* (*TBC*) is to the version currently in effect.

In this directive:

1) "**customer**" is a person purchasing electricity for the person's own use as defined in the *EUA* or a consumer of gas who takes delivery of the gas at its place of consumption by means of a gas distribution system of a gas distributor as defined in the *GUA*;

2) "**demand period**" has the meaning ascribed to the term in the *TBC;*

3) "**distributor**" is the owner, operator, manager, or lessee of a gas distribution system, as defined in the *GUA*, or an owner, operator, manager, or lessee of an electric distribution system, as defined in the *EUA*;

4) "**elapsed business day**" has the meaning ascribed to the term in the *TBC*;

5) "**historic usage**" is the consumption and demand (e.g., kWh, kW, kVA, GJ,) metered at or estimated for a site for a previous usage period as provided in a tariff bill file;

6) "**Historic Usage File**" (**HUF**) is a physical electronic file containing site-specific historic usage and demand information for given historic usage periods;

7) "**MSA**" is the Market Surveillance Administrator as defined in the *EUA*;

8) "**representation and warrant document**" is a document executed by a retailer and filed with a distributor providing a framework within which a distributor does not have to evaluate customer consent documentation;

9) "**Request for Usage**" (**RFU**) is a physical electronic transaction sent from a retailer to a distributor requesting site-specific historic usage information;

10) "**retailer**" is a person who sells or provides retail electricity services, as defined in the *EUA*, or a person who provides retail gas services; it includes an affiliated retailer, as defined in the *GUA*;

11) "***SSC***" is *Settlement System Code*;

12) "***Tariff Billing Code***" (***TBC***) is the *Tariff Billing Code*, published as EUB *Directive 012*, which sets out the standards for communicating site-specific distribution and transmission charges and usage information relevant to calculating energy charges;

13) "**usage period**" has the meaning ascribed to the term in the *TBC*; and

14) "**weather normalization**" is the method of mathematically adjusting actual usage data to remove the impact of weather that may result in abnormally high or low energy consumption to represent energy typically consumed in an average year for the same location.

1.4 Interpretations

Section headings used in this directive are for convenience only and shall not affect the interpretation of this directive. Words in the singular shall include the plural and vice versa. A reference to a document or a provision of a document includes any amendment, supplement to, or replacement of that document or that provision of that document.

1.5 Application

This directive sets the minimum requirements that a distributor under the EUB's jurisdiction must meet to provide timely and accurate historic usage information to retailers. A distributor's duty starts once a request for historic usage is received by the distributor provided that the format and content of the request comply with the requirements in this directive.

2 Summary of Historic Usage Information Obligations

2.1 Reliance on Representation and Warrant Framework

A retailer must provide to the distributor a representation and warrant document. The representation and warrant document is to be recognized as being demonstrative proof that customer consent was obtained by the retailer each time a retailer makes a request for historic usage information. The distributor is expected to rely upon the representation and warrant document as being proof of customer consent unless specific circumstances warrant further verification by the distributor.

2.2 Communication with Market Participants

The following section identifies the requirements to communicate with one or more market participants but leaves the method of communication, except where noted, to the discretion of the communicator.

2.2.1 Distributor-Initiated Communication

Distributors are obligated to communicate

1) to the EUB (gas distributors only), a weather station file indicating Environment Canada recognized weather stations relevant to a distributor's territory, and
2) to retailers, inability to respond to a historic usage request within the time frame prescribed in Section 2.6.

Information communicated to the EUB will be made publicly available on the EUB Web site www.eub.ca.

2.3 Requests for Historic Usage

Retailers having an established relationship with a distributor may request historic usage information from the distributor for a period of 425 calendar days from the date of request and must transmit this request according to the transaction format and production rules prescribed in Section 4.2.

2.4 Assembling Historic Information

Upon receipt of a valid request for usage transaction, distributors are required to query site-specific historic usage and applicable demand information for a period of no more than 425 calendar days from the date of request.[1] If usage or demand information does not exist for the full period, the distributor must rely only on available information. The distributor is responsible for assembling site-specific historic usage and applicable demand information according to the usage period and demand period definitions in Section 3.3 of the *TBC*, the interval period definitions in Section B.6.1.1 of the *SSC*, and the historic usage file format and production rules prescribed in Section 4.3.1 of this directive.

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[1] A distributor is not required to provide historic usage information for salvaged sites.

2.5 Audit Historic Usage Information Process

As prescribed in the *EUA*, it is the MSA's mandate to carry out surveillance and investigation in relation to the conduct of market participants to ensure a fair, efficient, and openly competitive retail electric energy market. In accordance with this mandate, the MSA will be responsible for conducting periodic audits of matters relevant to the historic usage information procedure to test compliance by market participants with the *EUA*, the electricity *Code of Conduct Regulation*, as well as the procedures in this directive. In carrying out such audits, the MSA may request information from market participants. To support auditing, the information outlined in Table 1 must be retained by market participants for a minimum of two years. The MSA may review the information to ensure, among other things, that

1) a representation and warrant document has been filed with the distributor;
2) customer consent is acquired and recorded;
3) the request for usage is consistent with the period of consent provided within customer consent documentation; and
4) the response to the request for usage is consistent with the period of request.

Table 1. Market participant storage requirements for historic usage information

Table ref ID	Data storage requirement	Responsibility
1	Representation and warrant document	Distributor and retailer
2	Completed customer consent form	Retailer
3	RFU transaction	Distributor and retailer
4	Summary HUF information (i.e., file header of the HUF)	Distributor
5	Detailed HUF information (i.e., complete HUF)	Retailer

2.6 Historic Usage File Response Timing

Distributors to whom this directive applies must structure their historic usage information processes and systems in a manner that allows them to respond to a historic usage request within three elapsed business days following receipt of request. It is understood, on an exception basis, that distributors may not be able to meet this requirement if high volumes of historic usage requests are experienced during a short period of time.

3 Historic Usage Information Model

This section of the directive establishes the process, information flow, procedural steps, roles, and responsibilities to support the request and release of historic usage information. The business transactions referred to in this section are further discussed in Section 4.

3.1 Historic Usage Information Process Flow

The following sections provide a description of retailer and distributor responsibilities with respect to performing the process shown in Figure 1. Each step corresponds to the numbered item in the figure.

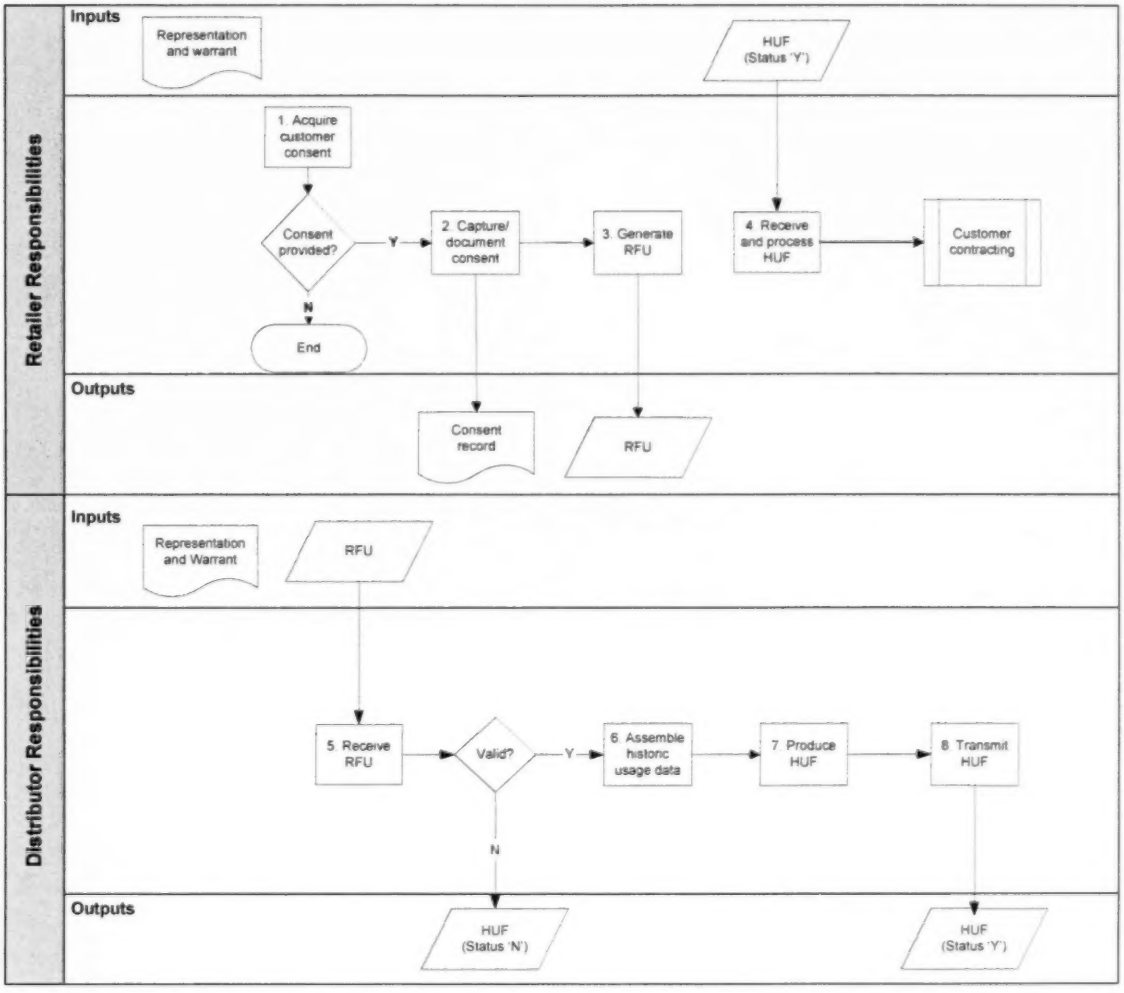


Figure 1. Historic usage information process flow

3.1.1 Retailer Responsibilities

In requesting historic usage information, a retailer must perform the following procedural steps:

1) In evaluating site-specific historic usage patterns, a retailer acquires customer consent, authorizing the retailer to request such information from a distributor on the customer's behalf.
   a) If the customer provides consent, the retailer proceeds to step 2.
   b) If the customer does not provide consent, the retailer does not proceed any further in the process.
2) The retailer documents customer consent in a format that will enable the retailer to demonstrate that customer consent has been granted.
3) The retailer sends a site-specific request for usage transaction to the distributor requesting historic usage information for a period of 425 calendar days.
4) The retailer receives an HUF the distributor containing available historic usage information for that site for a period of no more than 425 calendar days.

3.1.2 Distributor Responsibilities

In responding to a retailer's request for historic usage information, a distributor must perform the following procedural steps:

1) The distributor receives the request for usage transaction from the retailer and validates the transaction according to internal processing or business rules:
   a) If step 5 results in no validation failures, the distributor proceeds with step 6.
   b) If step 5 results in validation failures, the distributor proceeds with step 7 in producing an HUF with a response status code of 'N' and supporting reason code.
2) The distributor assembles applicable historic usage, demand, and interval data for the site for a period of no more than 425 calendar days from the Date Created element of the request for usage transaction.
3) The distributor produces an HUF.
4) The distributor electronically transmits the HUF to the retailer.

4 Information Exchange

This section defines the standard electronic transactions that apply to the exchange of historic usage information between a distributor and retailer to support customer prospecting and contracting processes and includes the business rules that govern the production and use of these transactions.

4.1 Information Exchange

The standards presented in the following sections, as well as Appendix A, are intended to be as specific as practical to facilitate information exchange between distributors and retailers.

4.1.1 Electronic Historic Usage File and Associated Transactions

The standard transactions required to support the historic usage information procedure are listed in Table 2. All transactions listed in the table that require electronic transmittal between a retailer and distributor are to be sent by way of the standard transaction transport method described in the *SSC* or in accordance with a gas distributor's procedures for electronic data exchange.

Table 2. Historic usage file (HUF) and associated transactions

Table ref ID	Activity	Relationship	File/transaction	Electronic transmittal required?
1	Request historic usage information	Retailer to distributor	Request for usage (RFU) transaction	✓
2	Provide historic usage information	Distributor to retailer	HUF	✓
3	Disclose weather station information	Distributor to retailer	Weather Station ID File (WSF)	Optional

4.2 Request for Usage Transaction

The RFU transaction provides a mechanism for retailers to request site-specific historic usage and demand information. The contents of the RFU transaction are provided in Table 3.

Table 3. Request for usage (RFU) transaction content

Element sequence	Element (in sequence)	Data type/size	Description
1	Transaction Abbreviation	Char(3)	MANDATORY FIELD – Transaction abbreviation. This must equal 'RFU'.
2	Transaction ID	Number(15)	MANDATORY FIELD – Unique identifier for the RFU transaction. This identifier must be unique to a retailer.
3	Sender ID	Retailer ID Format	MANDATORY FIELD – Unique identifier for the sender. This identifier must equal that of the retailer sending the transaction and must adhere to the rules defined in Appendix A.
4	Recipient ID	Distributor ID Format	MANDATORY FIELD – Unique identifier for the recipient. This identifier must equal that of the distributor receiving the transaction and must conform to the rules defined in Appendix A.
5	Date Created	Datetime	MANDATORY FIELD – Datetime the RFU transaction was created or last modified.
6	Site ID	Site ID Format	MANDATORY FIELD – Unique identifier representing a site in the electric or gas market. This value must adhere to the rules defined in Appendix A.

Element sequence	Element (in sequence)	Data type/size	Description
7	Customer Consent Reference ID	Number(15)	MANDATORY FIELD – Unique identifier representing a signed customer consent form. This value must equal the reference ID of the customer consent form indicating that consent for requesting historic usage information for this site has been granted.

Production Rules

The following production rules apply for the RFU transaction:

1) Data contained within the RFU transaction must adhere to the field level rules stated in Table 3.

2) An RFU transaction must be created for each site for which a retailer requests historic usage.

3) An RFU transaction must be sent to a distributor within two elapsed business days of being created.

4.3 Historic Usage File Structure

The HUF presents site-level historic usage and demand information for a period of time not greater than 425 calendar days. The HUF is presented in a hierarchical structure, which supports presentation of summary site, detailed historic usage information, detailed historic interval usage information, detailed historic demand information, and summary file information. The HUF structure, represented in Figure 2 for presentation purposes, is provided and transmitted as a comma separated value (CSV) file.

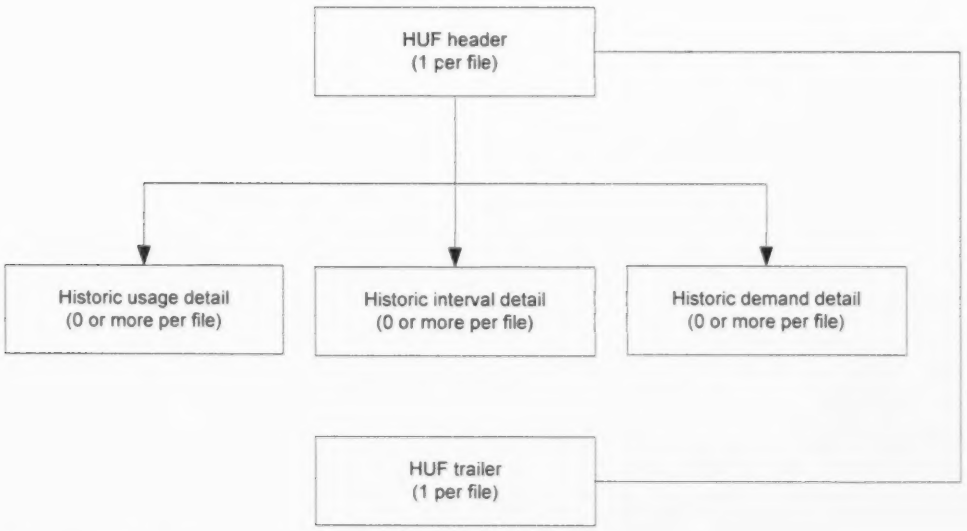
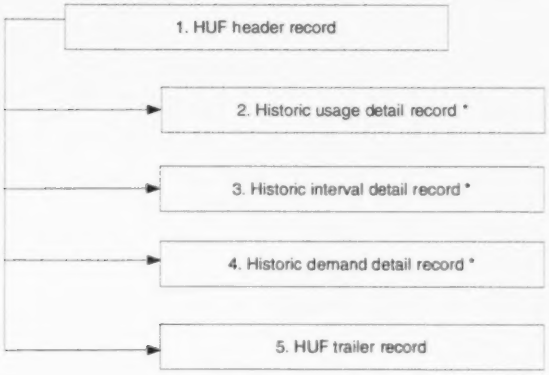


Figure 2. HUF structure

4.3.1 Historic Usage File Record Production Sequence

The record production sequence of all data within each HUF is provided in Figure 3.


1. HUF header record
2. Historic usage detail record *
3. Historic interval detail record *
4. Historic demand detail record *
5. HUF trailer record

* Record may not appear in an HUF when historic usage data are not available for the site.

Figure 3. Historic usage file record production sequence

Each step below corresponds to a numbered item in Figure 3.

1) The HUF header record must be presented as the first record in an HUF.

2) If historic usage detail records are applicable, the historic usage detail record(s) must be presented following the HUF header record and in ascending date sequence.

3) If historic interval detail records are applicable, the historic interval detail record(s) must be presented following the historic usage detail records and in ascending date sequence.

4) If historic demand detail records are applicable, the historic demand detail record(s) must be presented following the historic interval detail record(s), when available, and in ascending date sequence.

5) The HUF trailer record must be presented as the last record in an HUF.

4.4 Historic Usage File Content Rules

This section provides the rules that a distributor is required to follow in the production of an HUF.

4.4.1 General Historic Usage File Rules

The following general rules apply in the production of an HUF:

1) The HUF contains data for a single site covering a period no more than 425 days from the Date Created element of the associated RFU transaction.

2) Where data fields are repeated throughout the file to link child records with their hierarchical parent, the field contents must match.

3) Depending on how each record element within the HUF is classified (i.e., mandatory, conditional, or optional) the element must be populated as follows:

a) Mandatory – element must be populated.

b) Conditional – element must be populated according to stated production rules.

c) Optional – element may be populated at a distributor's discretion.

4) Historic usage and demand information must be presented according to usage and demand periods as defined in Section 3.3 of the *TBC*.

4.4.2 Historic Usage File Header

The file header of an HUF contains summary information necessary to validate and track information contained within the file. The contents of the file header are provided in Table 4.

Table 4. Historic usage file (HUF) header content

Element sequence	Element (in sequence)	Data type/size	Description
1	Record ID	Number(15)	MANDATORY FIELD – A unique reference ID for an HUF header record to allow a distributor or retailer to refer to the specific data record. This value must be unique to a distributor.
2	Parent ID	Number(15)	MANDATORY FIELD – Must be populated with [null] for the HUF header record.
3	Record Type	Char(2)	MANDATORY FIELD – Code to indicate record type. This code must equal 'HH'.
4	Sender ID	Distributor ID format	MANDATORY FIELD – Unique identifier for the sender. This identifier must equal that of the distributor sending the HUF and must conform to the rules defined in Appendix A.
5	Recipient ID	Retailer ID format	MANDATORY FIELD – Unique identifier for the recipient. This identifier must equal that of the intended retailer receiving the HUF and must adhere to the rules defined in Appendix A.
6	RFU Reference ID	Number(15)	MANDATORY FIELD – Unique identifier representing the RFU transaction being responded to. This value must equal the Record ID presented in the associated RFU transaction.
7	Customer Consent Reference ID	Number(15)	MANDATORY FIELD – Unique identifier representing a customer consent form. This value must equal the Customer Consent Reference ID of the RFU being responded to.
8	Date Created	Datetime format	MANDATORY FIELD – Datetime the HUF was created or last modified.
9	Response Status Code	Char(1)	MANDATORY FIELD – Y/N value indicating whether historic usage and/or demand information is provided. Y=Yes; N=No.
10	Response Reason Code	Number(4)	CONDITIONAL FIELD – Code to identify the reason a distributor was unable to provide data for the requested site. Refer to Appendix A for further information. If Response Status Code equals 'N', this field is MANDATORY; otherwise it must equal [null].
11	Site ID	Site ID format	MANDATORY FIELD – Unique identifier representing a site in the electric and gas market. This must equal the site ID requested in the associated RFU transaction.
12	Commodity Code	Char(2)	MANDATORY FIELD – Standardized code representing commodity type. Refer to Appendix A for further information.
13	Tariff Rate Code	Varchar(9)	CONDITIONAL FIELD – Code to identify the most recent tariff rate code applicable to the site. The description of the code used in this field must match the distributor's published tariff rate code. Refer to Appendix A for further information. If Response Status Code equals 'Y', this field is MANDATORY; otherwise it must equal [null].
14	Profile Class	Varchar(20)	CONDITIONAL FIELD – Code to identify the most recent load profiling class applicable to the site. If Response Status Code equals 'Y', this field is MANDATORY; otherwise it must equal [null].

Element sequence	Element (in sequence)	Data type/size	Description
15	Weather Station ID	Varchar(4)	CONDITIONAL FIELD – Code to represent the distributor's reference to the Environment Canada weather station from which degree day information can be obtained specific to the site for weather normalization purposes. Refer to Appendix A for further information. This should reflect the most recent Weather Station ID applicable to the site. If Response Status Code equals 'Y' and Commodity Code UOM equals 'GJ', this field is MANDATORY; otherwise it must equal [null].
16	Temperature Sensitive Site Indicator	Char(1)	CONDITIONAL FIELD – Y/N value indicating a temperature sensitive site. Y=Yes; N=No. If Response Status Code equals 'Y' and Commodity Code UOM equals 'GJ', this field is MANDATORY; otherwise it must equal [null].
17	Historic Usage Response Start Date	Date format	CONDITIONAL FIELD – Start date (inclusive) of the historic usage response. If Response Status Code equals 'Y', this field is MANDATORY and must equal the earliest Historic Usage Period Start Date of historic usage periods for the site; otherwise it must equal [null].
18	Historic Usage Response End Date	Date format	CONDITIONAL FIELD – End date (inclusive) of the historic usage response. If Response Status Code equals 'Y', this field is MANDATORY and must equal the latest Historic Usage Period End Date of historic usage periods for the site; otherwise it must equal [null].

Production Rules

The following production rules apply for the HUF header:

1) Data contained within the HUF header must adhere to the field level rules stated in Table 4.

2) An HUF must contain only one HUF header record.

4.4.3 Historic Usage Detail

The historic usage detail record of the HUF is a hierarchical child of the HUF header and is the physical representation of historic usage relevant to the requested site. The contents of the historic usage detail record are provided in Table 5.

Table 5. Historic usage detail content

Element sequence	Element (in sequence)	Data type/size	Description
1	Record ID	Number(15)	MANDATORY FIELD – A unique reference ID for a historic usage detail record to allow a distributor or retailer to refer to the specific data record. This value must be unique to a distributor.
2	Parent ID	Number(15)	MANDATORY FIELD – Unique reference ID for the parent HUF header record. This must equal the record ID presented in the HUF header.
3	Record Type	Char(2)	MANDATORY FIELD – Code to indicate record type. This code must equal 'HU'.
4	Historic Usage Period Start Date	Date format	MANDATORY FIELD – Start date (inclusive) of a historic usage period. This field must represent a full-day equivalent and correspond to the Usage Period Start Date as disclosed in tariff billing processes for this site.
5	Historic Usage Period End Date	Date format	MANDATORY FIELD – End date (inclusive) of a historic usage period. This field must represent a full-day equivalent and correspond to the Usage Period End Date as disclosed in tariff billing process for this site.
6	Site Status Code	Char(1)	MANDATORY FIELD – Standardized code representing a site's status relative to the usage period. Refer to Appendix A for further information.

Element sequence	Element (in sequence)	Data type/size	Description
7	Meter Type Code	Char(1)	MANDATORY FIELD – Code to indicate meter type. Refer to Appendix A for further information.
8	Meter Number	Varchar(20)	CONDITIONAL FIELD – Unique identifier within a distributor's zone representing a meter. If Meter Type Code equals 'C', this field is MANDATORY.
9	Number of Dials	Number(3)	CONDITIONAL FIELD – Value representing the number of dials on a meter. The value must represent a positive integer. If Site Status Code equals 'E' and Meter Type Code equals 'C', this field is MANDATORY.
10	From Reading	Number(14,4)	CONDITIONAL FIELD – Value representing the start dial read for the usage period. If Site Status Code equals 'E' and Meter Type Code equals 'C,' this field is MANDATORY.
11	From Reading Code	Char(1)	CONDITIONAL FIELD – Standardized reading type code to indicate type of reading. Refer to Appendix A for further information. If Site Status Code equals 'E' and Meter Type Code equals 'C', this field is MANDATORY.
12	To Reading	Number(14,4)	CONDITIONAL FIELD – Value representing the end dial read value for the usage period. If Site Status Code equals 'E' and Meter Type Code equals 'C', this field is MANDATORY.
13	To Reading Code	Char(1)	CONDITIONAL FIELD – Standardized reading type code to indicate type of reading. Refer to Appendix A for further information. If Site Status Code equals 'E' and Meter Type Code equals 'C', this field is MANDATORY.
14	Billing Multiplier	Number(14,9)	CONDITIONAL FIELD – Billing multiplier is the factor that is multiplied by the meter dial difference to determine a usage value. This value must be a positive number. If Site Status Code equals 'E' and Meter Type Code equals 'C', this field is MANDATORY.
15	Usage Amount	Number(13,4)	MANDATORY FIELD – Value representing the number of units consumed. If Meter Type equals 'I', this represents the total measured usage for the usage period. If Meter Type equals 'C', where metering information has been provided the Usage Amount must be within 0.5 kWh of the result of the following calculation: (To Reading – From Reading) × Billing Multiplier, where To Reading is greater than From Reading, or (10 to the power of the Number of Dials + To Reading – From Reading) × Billing Multiplier where To Reading is less than From Reading; otherwise Usage Amount must equal 0. If Meter Type equals 'U', this represents deemed usage for the period. If Meter Type equals 'T', this represents total usage recorded for all meters attributed to the totalized site for the period. If Meter Type equals 'S', this represents net consumption for primary and subtract meters attributed to the site for the period.
16	Usage UOM	Varchar(4)	MANDATORY FIELD – Unit of measure for usage. If Commodity Code equals 'EL', Usage UOM must equal 'KWH'. If Commodity Code equals 'NG', Usage UOM must equal 'GJ'.

Production Rules

The following production rules apply to the historic usage detail record:

1) Data contained within the historic usage detail record must adhere to the stated rules for each element in Table 5.

2) If a site has no usage records or the distributor is creating an HUF containing a Response Status Code equal to 'N', this record will be absent from the HUF.

3) One or more historic usage information detail records may be required in response to a retailer's request.

4) Historic usage detail records must not exceed the 425-calendar-day period prior to and including the Date Created element of the RFU transaction being responded to (i.e., the earliest Historic Usage Period Start Date must not be earlier than the date established by subtracting 425 calendar days from the full-day equivalent of the Date Created element in the RFU transaction plus one calendar day, and the latest Historic Usage Period End Date must not be later than the full-day equivalent of the Date Created element of the RFU transaction).

5) Historic usage detail records must adhere to the usage period definition in Section 3.3 of the *TBC*.

6) Historic usage detail records cannot overlap.

4.4.4 Historic Interval Detail

The historic interval detail record of the historic usage file is a hierarchical child of the historic usage file header and is the physical representation of the historic interval information relevant to the requested site, where the site is interval metered. This record provides detailed historic interval information for the historic usage periods disclosed in historic usage detail records. The contents of the historic interval detail record are provided in Table 6.

Table 6. Historic interval detail content

Element sequence	Element (in sequence)	Data type/size	Description
1	Record ID	Number(15)	MANDATORY FIELD – This must be a unique reference ID for each historic interval detail record produced by a distributor to allow the distributor or retailer to refer to the specific data record. This value must be unique to a distributor.
2	Parent ID	Number(15)	MANDATORY FIELD – Unique reference ID for the parent HUF header record. This must equal the record ID presented in the HUF header record.
3	Record Type	Char(2)	MANDATORY FIELD – Code to indicate record type. This value must equal 'HI'.
4	Usage Value (kWh)	Number(10,4)	MANDATORY FIELD – Usage value, in kilowatt hours, indicating the usage in the interval period.
5	Demand value (kW)	Number(10,4)	MANDATORY FIELD – Demand value, in kilowatts, indicating the demand in the interval period.
6	Demand Value (kVA)	Number(10,4)	MANDATORY FIELD – Demand value, in kilowatt-amperes, indicating the demand in the interval period.
7	Interval Period End Datetime	Datetime format	MANDATORY FIELD – End datetime of the interval period as disclosed in a Daily Interval Meter (DIM) transaction for this site.
8	Interval Period	Number(4)	MANDATORY FIELD – Number of minutes between readings as disclosed in a DIM transaction for this site.
9	Hour Ending	Char(3)	MANDATORY FIELD – The hour ending for the interval period as disclosed in a DIM transaction for this site.

Production Rules

The following production rules apply to the historic interval detail record:

1) Data contained within the historic interval detail record must adhere to the stated rules for each element in Table 6.

2) Data contained within the historic interval detail record must be presented according to the interval period defined in the associated DIM transaction.

3) If historic interval detail records do not apply (i.e., the site is not interval metered during the period of response) or the distributor is creating an HUF containing a Response Status Code equal to 'N', this record is absent from the HUF.

4) One or more historic interval detail records may be required in response to a retailer's request.

5) Historic interval detail records must not exceed the 425-calendar-day period prior to and including the Date Created element of the RFU transaction being responded to (i.e., the earliest Historic Interval End Datetime must not be earlier than the date established by subtracting 425 calendar days from the full-day equivalent of the Date Created element in the RFU transaction plus one calendar day, and the latest Historic Interval End Datetime must not be later than the full-day equivalent of the Date Created element of the RFU transaction plus one second[2]).

6) Historic interval detail records must be relevant to the historic usage periods provided in the historic usage detail records.

4.4.5 Historic Demand Detail

The historic demand detail record of the HUF is a hierarchical child of the HUF header and is the physical representation of the historic demand relevant to the requested site. The contents of the historic demand detail record are provided in Table 7.

Table 7. Historic demand detail content

Element sequence	Element (in sequence)	Data type/size	Description
1	Record ID	Number(15)	MANDATORY FIELD – This must be a unique reference ID for each demand record produced by a distributor to allow the distributor or retailer to refer to the specific data record. This value must be unique to a distributor.
2	Parent ID	Number(15)	MANDATORY FIELD – Unique reference ID for the parent HUF header record. This must equal the record ID presented in the HUF header record.
3	Record Type	Char(2)	MANDATORY FIELD – Code to indicate record type. This value must equal 'HD'.
4	Demand Period Start Date	Date format	MANDATORY FIELD – Start date (inclusive) of the historic demand period. This must represent a full-day equivalent and correspond to the Demand Period Start Date as disclosed in tariff billing processes for this site.
5	Demand Period End Date	Date format	MANDATORY FIELD – End date (inclusive) of the historic demand period. This must represent a full-day equivalent and correspond to the Demand Period End Date as disclosed in tariff billing processes for this site.

[2] The *SCC* requires distributors to populate the Datetime element of a DIM transaction for the last 15-minute interval of a day with a value equivalent to the beginning of the next day (i.e., the last 15-minute interval for June 30, 2007, would be presented as 20070701000000).

Element sequence	Element (in sequence)	Data type/size	Description
6	Demand Type Code	Number(4)	MANDATORY FIELD – Standardized code indicating the demand type. Refer to Appendix A for further information.
7	Demand Value	Number(10,4)	MANDATORY FIELD – Value indicating the demand recorded during the demand period as per the demand type code.
8	Demand UOM	Varchar(4)	MANDATORY FIELD – Standardized code representing the unit of measure. Refer to Appendix A for further information.
9	Ratchet Datetime	Datetime format	CONDITIONAL FIELD – Datetime ratchet value was established. The datetime in this field must occur prior to the HUF Date Created. If Demand Type Code equals 'Ratchet', 'Transmission Ratchet', 'Distribution Ratchet' or 'Service Ratchet', this field is MANDATORY; otherwise it must equal [null]. If Meter Type Code equals 'C', report the meter reading end date of the period within which the ratchet was established.
10	Ratchet Period Months	Number(2)	CONDITIONAL FIELD – The number of months that the ratchet is set for according to a distributor's published tariff. If Demand Type Code equals 'Ratchet', 'Transmission Ratchet', 'Distribution Ratchet' or 'Service Ratchet', this field is MANDATORY; otherwise it must equal [null].
11	Power Factor	Number(7,6)	CONDITIONAL FIELD – Power factor value as reported by the distributor. This value must reflect Power Factor application, where applicable. If a conversion is not required between Measured Demand UOM and Component Billed Quantity UOM or tariff charges do not depend on a Power Factor conversion, this must equal [null] If Commodity Code equals 'NG', then Power Factor must equal [null].

Production Rules

The following production rules apply to the historic demand detail record:

1) Data contained within the historic demand detail record must adhere to the stated rules for each element in Table 7.

2) If demand records do not apply or the distributor is creating an HUF containing a Response Status Code equal to 'N', this record will be absent from the HUF.

3) One or more historic demand detail records may be required in response to a retailer's request.

4) Historic demand detail records must not exceed the 425-calendar-day period prior to and including the Date Created element of the RFU transaction being responded to (i.e., the earliest Historic Demand Period Start Date must not be earlier than the date established by subtracting 425 calendar days from the full-day equivalent of the Date Created element in the RFU transaction plus one calendar day, and the latest Historic Demand Period End Date must not be later than the full-day equivalent of the Date Created element of the RFU transaction).

5) Historic demand detail records must disclose, at a minimum, the following demand types applicable to the site during the demand period:
   a) metered demand
   b) deemed demand
   c) billing demand

6) Distributors are not required to disclose contract demand when applicable to a site.

7) Historic demand detail records must adhere to the demand period definition in Section 3.3 of the *TBC*.

8) Historic demand detail records cannot overlap.

4.4.6 Historic Usage File Trailer

The file trailer record of an HUF contains summary information necessary to validate information contained within the HUF. The contents of the file trailer are provided in Table 8.

Table 8. Historic usage file trailer content

Element sequence	Element (in sequence)	Data type/size	Description
1	Record ID	Number(15)	MANDATORY FIELD – This must be a unique reference ID for each HUF trailer record produced by a distributor to allow the distributor or retailer to refer to the specific data record. This value must be unique to a distributor.
2	Parent ID	Number(15)	MANDATORY FIELD – Unique reference ID for the parent HUF header record. This must equal the record ID presented in the HUF header record.
3	Record Type	Char(2)	MANDATORY FIELD – Code to indicate record type. This value must equal 'HT'.
4	File Record Count	Number(9)	MANDATORY FIELD – Count of records (including HUF header and trailer records) in the HUF.

Production Rules

The following production rules apply for the file trailer record:

1) Data contained within the historic usage file trailer record must adhere to the stated rules for each element in Table 8.

2) An HUF must contain only one file trailer record.

5 Compliance

This section defines the procedures, roles, and responsibilities to evaluate a market participant's capability to exchange historic usage information according to the standards of this directive. A distributor's capabilities will be evaluated according to its

1) compliance plan, reporting its intent to comply with the procedures in this directive, and
2) pretransition review results.

5.1 Compliance Plan

5.1.1 Compliance Plan Requirements

All distributors must

1) prepare a compliance plan confirming
   a) the role the distributor is performing with respect to these standards,
   b) that the distributor is aware of and understands its requirements,
   c) the distributor's intent to comply with the transactional requirements, as defined in Sections 3 and 4 of this directive,
   d) the name, postal address, phone number, and e-mail address of the senior authority accountable for compliance with this directive;
2) file its compliance plan with the EUB; and
3) receive approval of its compliance plan from the EUB.

5.1.2 Changes to Compliance Plan

Each distributor must keep its respective compliance plan up to date and must make changes to the compliance plan to reflect changes in circumstances, EUB-directed changes, and changes to this directive. A change to a compliance plan must be submitted to the EUB for approval within 30 calendar days following a change in circumstances, the publication of an approved exemption, or an EUB-directed change.

5.1.3 Approval by the EUB

The EUB may approve the compliance plan of a distributor with or without conditions. The plan will remain in effect for the period prescribed by or until revoked by the EUB. The EUB will make available on the EUB Web site www.eub.ca the compliance plan submitted by distributors.

5.1.4 Temporary Compliance Exemptions

A distributor may apply to the EUB for a temporary exemption from all or any provision of this procedure. The EUB will not approve an exemption unless it is satisfied that

1) it is in the public interest to do so,
2) the exemption does not significantly affect the obligations of the distributor or the obligations can be or will be met in other ways for the duration of the exemption, and
3) the exemption does not affect the distributor's ability to comply with the related codes, regulations, and legislation cited in Section 1.2 of this directive.

The EUB will publish any request for a temporary exemption and seek comments from interested stakeholders prior to considering the exemption request. The EUB may approve an exemption with or without conditions, and the exemption will remain in effect for the period of time specified by or until revoked by the EUB. The EUB will make all approved exemptions available on its Web site.

5.1.5 Emergency Exceptions

Any action taken by a distributor in response to an emergency that threatens public safety, the safety of its respective officers, employees, agents, or contractors, or the physical integrity of its facilities or system reliability does not contravene this directive or a distributor's compliance plan.

5.2 Pretransition Review

A distributor must demonstrate to the EUB's satisfaction its capabilities to exchange historic usage information according to the standards in this directive prior to receiving EUB approval to implement these standards. The EUB will establish a process and timeline that prescribes the manner in which a distributor must demonstrate its capability to comply.

Appendix A Universal Electronic Transaction Standards

This appendix contains the universal standards that govern the historic usage information transactions in Table 2. For consistency in the marketplace, this directive adopts the standards included in the *SSC* or in accordance with the gas distributors' procedures where appropriate.

A1 Directory Structure

Each market participant governed by this directive must conform with the directory structure dictated by the market transaction transport method used to send and receive electronic files and or transactions.

A2 File-Naming Conventions

A2.1 Files Transmitted Electronically

All transactions of the same type for a period are to be placed in a single CSV formatted file. The file name must be unique across all files produced by the market participant. The standard file naming convention is

TXN_Sender_Recipient_YYYYMMDDHHMISS.CSV
where

TXN:	three-letter abbreviation for the transaction name (e.g., Request For Usage = RFU) or file name (e.g., Historic Usage File = HUF)
Sender:	ID of the sender (i.e., Distributor ID of the distributor responsible for the site[s] or Retailer ID)
Recipient:	ID of the recipient (i.e., Distributor ID of the distributor receiving the file or transaction or Retailer ID)
YYYYMMDD:	Date the file was created (e.g., 20041202)
HHMISS:	Time the file was created on a 24-hour clock (e.g., 192432)

A2.2 Files Available for Download

The standard file naming convention is
TXN_Sender_ YYYYMMDDHHMISS.CSV
where

TXN:	three-letter abbreviation for the transaction name (e.g., Weather Station ID File = WSF)
Sender:	ID of the sender (e.g., Distributor ID of the distributor responsible for the site)
YYYYMMDD:	Date the file was created (e.g., 20041202)
HHMISS:	Time the file was created on a 24-hour clock (e.g., 192432)

A3 CSV File Format

1) Data in each file or transaction must be presented as comma separated values.

2) Commas (,) may only be used as field separators. No data field may be populated with a comma (,).

3) Each field in the file format is a placeholder; therefore if the field has a [null] or empty value, it must be represented as ',,' in the CSV output file.

A4 Data-type definition

The following sections describe the various data types used in the historic usage information transactions.

A4.1 Char(x)

Fixed length character field that must be x characters in length.
For example, Char(3) is 'ABC'.

A4.2 Varchar(x)

Variable length character field that can be a maximum of x characters in length.
For example, Varchar(3) is 'A','AB', or 'ABC'.

A4.3 Number(p,s)

Number field with p digits of precision and s digits of scale to the right of the decimal.
For example, 123456.78 is Number(8,2) and .0012 is Number(4,4).

A number (p,s) formatted field presented in a CSV file may present as many as (p +2) characters when the full number limit is reached for that field and the charge or charge period is being adjusted (i.e., contains a negative sign and a decimal place.)

A4.4 Date

Date field that requires a specified date in the following standard format:

YYYYMMDD
where

YYYY:	year with century (e.g., 2004)
MM:	two-digit month (01 – 12)
DD:	two-digit day (01 – 31)

A4.5 Datetime

Datetime field that requires a specified date and time in the following standard format:

YYYYMMDDHHMISS
where

YYYY:	year with century (e.g., 2004)
MM:	two-digit month (01 – 12)
DD:	two-digit day (01 – 31)
HH:	two-digit hour on a 24-hour clock (00 – 24)
MI:	two-digit minute (00 – 59)
SS:	two-digit second (00 – 59)

A5 Negative Numbers

When a numeric value is to be represented as a negative, the number must be shown with the minus sign '-' preceding the value.
For example, negative 123.45 must be shown as -123.45.

A6 Standard Codes

The standard codes defined in this section are limited to those transactions governed solely by this directive. In the production of transactions governed by this directive, market participants will also need to rely on standard codes governed by the *SSC*, *TBC*, and other authorities, as well as distributors. For completeness, this section provides reference to these other authorities where appropriate.

A6.1 Record Type Code

A two-character code representing record type.

Table A1. Record type codes

Table Ref ID	Record type code	Record type name
1	HH	HUF header record
2	HU	Historic usage detail record
3	HI	Historic interval detail record
4	HD	Historic demand detail record
5	HT	HUF trailer record

A6.2 Retailer ID

A unique nine-digit value identifying a retailer. In the case of an electric retailer, this is equivalent to the Retailer ID of the retailer of record for the physical site as defined in Schedule B of the *SSC*.

A6.3 Distributor ID

A unique four-digit value identifying a distributor. In the case of an electric distributor, this is equivalent to the Distributor ID responsible for the physical site as defined in Schedule B of the *SSC*.

A6.4 Commodity Code

A two-character code representing commodity as prescribed in Table B5-2 of the *TBC*.

A6.5 Tariff Rate Code

A code representing the tariff rate applicable to a site as prescribed in Table B5-8 of the *TBC*.

A6.6 Weather Station ID

Each gas distributor maintains its respective weather stations via a Weather Station ID File (WSF) and provides this to the EUB for publication to fulfill the requests of the Weather Station ID element in the HUF header record of the HUF. The contents of the Weather Station ID File are shown in Table A2.

Table A2. Weather Station ID file (WSF) content

Element sequence	Element (in sequence)	Data type/size	Description
1	Distributor ID	Distributor ID Format	MANDATORY FIELD – Unique identifier for a distributor. This identifier must equal that of the gas distributor for whom the Weather Station ID applies.
2	Weather Station ID	Char(3)	MANDATORY FIELD – Represents a unique identifier for the weather station from which degree-day information can be obtained for weather normalization purposes. This must adhere to Environment Canada's identifier (Transportation Code ID [TC ID]) for the weather station.

A6.7 Response Reason Code

A four-digit code representing a distributor's reason for not responding to a request for usage transaction.

Table A3. Response reason codes

Table Ref ID	Reason Code	Response reason code description
1	0001	Invalid Retailer ID
2	0002	No representation and warrant document on file
3	0003	Invalid Site ID within distributor's territory
4	0004	Invalid Distributor ID
5	0005	Non-unique RFU Transaction ID
6	0006	Retailer is retailer of record for the requested period
7	0007	Time lapse between RFU date created and distributor receipt date exceeds 2 elapsed business days
8	0008	Invalid Date Format
9	0009	Unable to process (i.e., Other)

A6.8 Site Status Code

A single-character code representing site status as prescribed in Table B5-9 of the *TBC*.

A6.9 Meter Type Code

A single-character code representing meter type as prescribed in Table B5-10 of the *TBC*.

A6.10 Reading Type Code

A single-character code representing reading type as prescribed in Table B5-11 of the *TBC*.

A6.11 Demand Type Code

A four-digit code representing demand type as prescribed in Table B5-12 of the *TBC*.

A6.12 Demand UOM

A four-character code representing demand UOM as prescribed in Table B5-13 of the *TBC*.